

# horseshoe park environmental learning center

rocky mountain national park  
estes park, colorado



*How can architecture respond to the natural environment?*



## the natural environment

Rocky Mountain National Park is a land of contrast and diversity. It straddles the Continental Divide in North Central Colorado, covering 415 square miles. From alpine tundra to coniferous forests and open meadows, the park contains several distinct ecosystems. Those distinct landscapes are the reason why Rocky has over 1100 different plant species and 360 animal species.

Consideration of plant and animal life and the factors affecting them is a very important to all designs that seek to compliment the environment. The Horseshoe Park Environmental Learning Center pursues several sustainable practices in its siting, material choices, active and passive systems, and by giving back to the site. Through these strategies, it strives to have a minimal impact on flora and fauna in the park.

## a changing landscape

Rocky Mountain National Park is a place in a state of constant change. Climate change is having a profound impact on a wide variety of species ranging from the lodgepole pine to the pika. Throughout Western North America, the mountain pine beetle epidemic has decimated over 3 million acres of forest in Colorado alone. Wildfires are becoming larger and more frequent from over 100 years of forest management and fire suppression. All of these factors are dramatically changing the ecosystems that exist within the park.

The center's design seeks to understand and harness these trends for the benefit of its users and the natural environment.



## the mission of the horseshoe park environmental learning center

The Horseshoe Park Environmental Learning Center sets out to tell the story of this changing and diverse natural environment. It seeks to serve visitors of all backgrounds by introducing them to the park and functions as a crossroads between local attractions in the area. It works to utilize the resources and understand the elements that make up the site and region in order to implement them in a design that both compliments and adapts to nature.

north view from site





west horsehoe park 1916

*Courtesy of W.T. Lee (USGS)*

west horsehoe park today

### a design adapted to the landscape

Set in a national park with 95% of the land designated wilderness, the Horseshoe Park Environmental Learning Center serves visitors to the park with a minimal impact on the land.

The center is designed to take advantage of a site that has already seen on and off use for the past century and has already been heavily impacted by human activities.

Its aesthetics seek to create a towering interior environment that maintains a connection to the site and the surrounding landscape. At the same time it works to create an exterior with a minimal visual impact on the beauty within the valley.

Its structure and layout addresses the site and regional elements ranging from soil type to daylight hours in order to blend in with the site and embrace its conditions rather than oppose them.

Most of all, the design combines all of the components of the Colorado environment and the building typology to create a sensible solution to the question posed in the thesis.



south view from site

